DEPARTMENT OF DEFENSE
DISCOVERY METADATA STANDARD
(DDMS)

REVIEW VERSION 1.2

2 June 2003

Deputy Assistant Secretary of Defense

(Deputy Chief Information Officer)

Foreword

The Department of Defense Discovery Metadata Standard (DDMS) defines discovery metadata elements for resources posted to community and organizational shared spaces. "Discovery" is the ability to locate data assets through a consistent and flexible search. The DDMS specifies a set of information fields that are to be used to describe any data or service asset that is made known to the Enterprise. The DDMS will be employed consistently across the Department's disciplines, domains and data formats.

This document is divided into two main sections. The first section (Chapters 1 through 3) provides information about the scope and purpose of the document, the structure of the DDMS, and a guide to understanding the second section. The second section (Chapters 4 through 7) contains a comprehensive listing of each of the elements and attributes that comprise the various layers of the DDMS. Additionally there are 2 appendices, an alphabetical element list, and a definitions list.

IMPORTANT NOTICE ABOUT THIS VERSION

This preliminary version of the DDMS describes the purpose for the development of this standard, and provides a level of understanding for developers, architects, and engineers as to the composition of the DDMS.

This document describes the DDMS elements and their logical groupings and does not provide an interchange specification or substantive implementation guidance. The DDMS elements as specified in this document, however, should provide a basis for organizations to begin planning, transitioning, and implementing metadata tagging initiatives that support the Department's goal of increased data visibility and Enterprise Discovery.

Activities are underway, in coordination with Horizontal Fusion and other initiatives, to pilot this version of the DDMS to provide an analysis of its usability and to assess its value in supporting Enterprise Discovery. Through coordination with these pilot activities, candidate additions and/or modifications are being identified for inclusion in subsequent versions. One particular example of a candidate enhancement is the inclusion of a robust structure to supplement the Summary Content Category Set.

It is important to note that a formal configuration management and evolution authority for this standard –and other Enterprise metadata activities– are in development, but as of the publication date of this draft those activities have not been formalized. As such, readers should note that some category and element definitions are subject to change and refinement in subsequent releases.

Comments and suggestions pertaining to the DoD Discovery Metadata Standard should be sent via email to the following:

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Change History

4 April 2003

Version 1.0 (Preliminary Review Version) – awaiting configuration management body issuance of approval.

5 May 2003

Version 1.1 (Preliminary Review Version) – Considered the feedback suggestions on PRV 1.0.

2 June 2003

Version 1.2 (Review Version) – modified the document to reflect a language and implementation neutral approach to defining the information elements in this DDMS publication. This latest draft version of the DDMS uses a more generic approach towards defining the elements within the document. The introductory text was rewritten to clarify the Department's vision for enterprise discovery. As a first step, the DoD CIO is publishing a list of information fields (ie. elements) that are appropriate to capture for the purposes of enterprise discovery. The goal is to give readers an early understanding of the scope of the tagging elements and the concept behind it. For example, readers will get a perspective for what level of tagging the Department envisions initially (e.g., not at the record level) and also what types of information the users will find searchable. Since the Department's various IT activities are very diverse, and the net-centric transformation has only recently begun, this document does not attempt to recommend implementation details and formats (such as interface specifications) that may preclude certain groups from getting on board with tagging.

In addition, the Audience element was removed from the Core element set, to bring the DDMS closer in line with the Dublin Core.

The Electronic version of this document is DDMS_RV_1_2g_2June2003.doc

References

The list of documents referenced within this standard are defined in Appendix AP2.

Definitions

Terms used in this standard are defined in Appendix AP3.

Abbreviations and Acronyms

CIO	Chief Information Officer
COI	Community of Interest
DCMI	Dublin Core Metadata Initiative
DDMS	DoD Discovery Metadata Standard
DED	Data Element Dictionary
DoD	Department of Defense
FIPS	Federal Information Processing Standard
IC MSP	Intelligence Community Metadata Standard for Publications
IEC	International Electrotechnical Commission
ISO	International Standards Organization
XML	Extensible Markup Language

Chapter 1. Scope and Purpose

C1.1. Introduction

C1.1.1. The *DoD Net-Centric Data Strategy* (dated May 9, 2003) defines goals and approaches that allow users and systems to find and access a wide-range of data assets throughout the Department of Defense (DoD) Enterprise. In support of that strategy, this standard is developed to support the net-centric goals of data visibility across the Department of Defense. For the purposes of this document, 'Enterprise' refers to the Department of Defense, its organizations and related agencies. The *DoD Net-Centric Data Strategy* defines a data asset as any entity that is composed of data. For example, a database is a data asset that contains data records; e.g., system or application output files, databases, documents, or web pages. The term 'data asset' also refers to services that provide access to data. For example, a service that returns individual records from a database is considered a data asset since it deals mainly in the function of providing data. Similarly, a web site that returns data in response to specific queries (e.g., www.defenselink.mil) is considered a data asset. A successful net-centric data environment depends on the ability of users and systems to locate and access data assets through a consistent and flexible search, or discovery capability. One facet of such an Enterprise-wide discovery capability is the ability to consistently describe data assets. A common specification for the description of data assets allows for a comprehensive capability that can locate all data assets across the Enterprise regardless of format, type, location, or classification.

C1.1.2. To facilitate data asset discovery, the Department of Defense has developed the *DoD Discovery Metadata Standard* (DDMS) as the common set of descriptive metadata elements that are to be associated with each data asset that is made visible to the Enterprise Discovery capability – a key capability for the realization of a powerful, net-centric environment. Metadata is often defined as being "data about data." Data assets available on the Enterprise must be described, with metadata, using the information elements defined in this document to permit discovery through the Enterprise Discovery capability. The DDMS defines a core set of elements that must be used to describe data assets made visible to the Enterprise. Users (human and systems) that search the

Enterprise will discover data assets that have been tagged and entered into catalogs or repositories that respond to search queries specified in terms of DDMS entries (see Figure C1.F1).

C1.1.3. This version of the DDMS is geared towards 'kick-starting' the Enterprise Discovery capability and to provide visibility into a wide-range of data assets. Accordingly, the near-term goal of the DDMS, coupled with Department policy and guidance, is to facilitate Enterprise Discovery of data assets at the summary, or macro level. Examples of initial DDMS usage include—

C1.1.3.1. Example 1: DDMS metadata elements are compiled based on the attributes of a database, to advertise the existence of the database as a whole. In doing so, users and systems across the Enterprise could discover that the database exists, a description of the database, the owner of the data asset, and possibly, how to access it. The initial focus of the DDMS is not geared towards the tagging of individual records or fields within databases. However, the DDMS and associated policy do not preclude record-level for discovery if it supports a mission need.

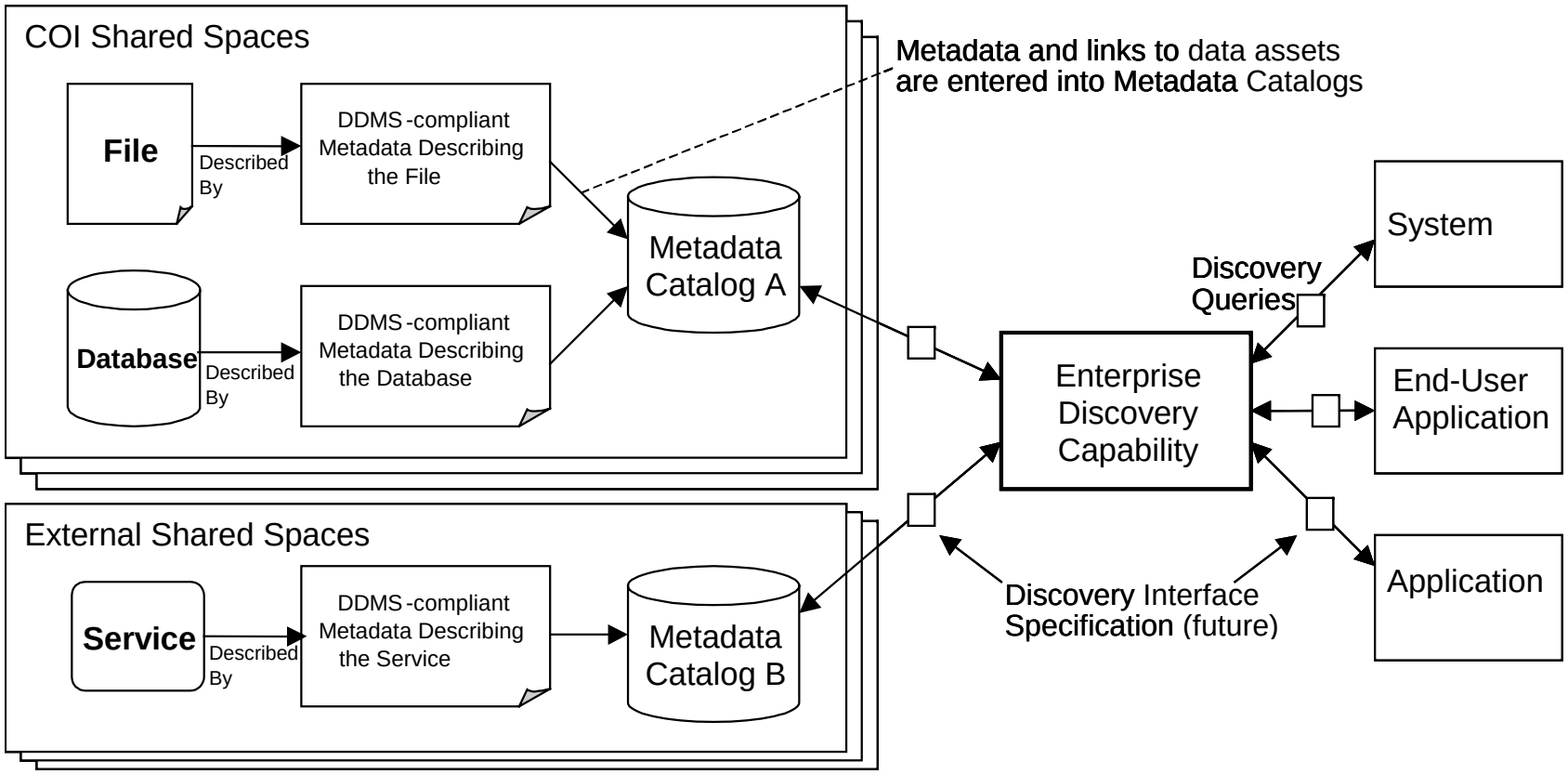
C1.1.3.2. Example 2: DDMS metadata elements are associated with an analysis report to advertise the existence of the report as a whole and to give visibility into the author, date created, and information about the content of the report (e.g., subject, keywords).

C1.1.4. The elements specified in this DDMS are designed to be platform, language, and implementation independent. Accordingly, system designers and engineers can decide on how to generate and store the discovery metadata information elements depicted in this document. This approach provides flexibility for system developers to generate and retain discovery metadata using any implementation approach, including using COTS products. As future Enterprise Discovery interface standards are defined, programs should have the appropriate discovery metadata available for their data assets and will only be required to format this metadata per the interface standards.

C1.1.4.1. The Department will not direct the level of granularity for which data asset discovery metadata must be generated. Components and cognizant DoD authorities should use engineering judgment to determine which data assets will be made available to the Enterprise and the appropriate level of discovery metadata to generate and store applicable to each data assets.

C1.1.5. The DDMS Usage Concept Diagram is depicted in Figure C1.F1.

Figure C1.F1. DDMS Usage Concept Diagram



Assets are 'advertised' by describing themselves in terms of DDMS metadata elements…

…assets are 'discovered' by the Enterprise Discovery capability that performs searches against DDMS metadata catalog entries

Chapter 2. DDMS Logical Model

C2.1. Approach

C2.1.1. The DDMS is designed using a layered approach, combining a Core Layer and an Extensible Layer. The Core Layer is composed of four sets of element categories, each with a specific functional focus for describing a data asset. The obligation, or provision requirement, of each category is determined by the elements contained within the category. Several of the metadata elements in the Core Layer are given a 'Mandatory' obligation (see Table C2.T1). Additionally, there are no constraints placed upon the repetition of an element.

C2.1.1.1. A 'Mandatory' obligation means that an element must be supplied, for a given data asset, in order to comply with the DDMS. A 'Mandatory Unless Not Applicable' obligation means that the element must be supplied unless there is no coverage/geolocation information related to the data asset. A 'Conditional' obligation means that the usage of an element is dependent upon a particular condition. An 'Optional' obligation means that an element can be supplied, but is not required to be supplied, for a given resource.

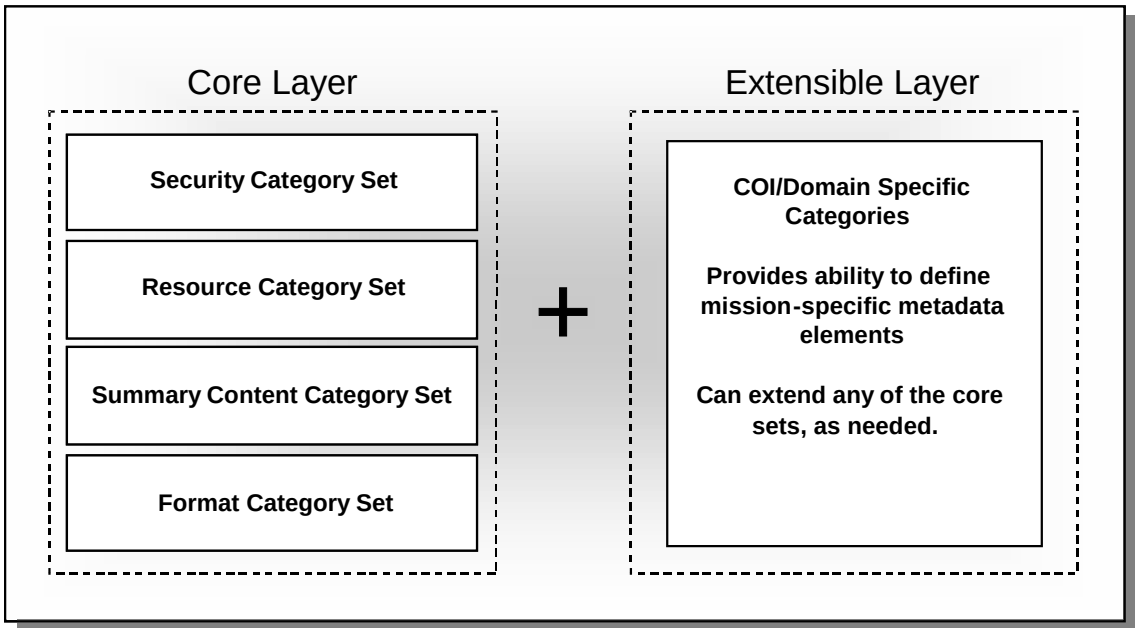
C2.1.2. The Extensible Layer is designed to support domain-specific or Community of Interest (COI) discovery metadata requirements, and can be used to extend the element categories identified in the Core Layer. In order to provide visibility into extensions to the DDMS, organizations and Communities of Interest will be required to register their extensions in the DoD Metadata Registry. Registered extensions provided to the DDMS may be integrated into the Enterprise Discovery capability.

C2.1.2.1. The DoD Metadata Registry is a clearinghouse for storage of metadata schematic formats. Registration of metadata (e.g., databases, data dictionary elements, extensible Markup Language, XML, components, segments, and etc.) is an important activity to support interoperability in a net-centric environment. COIs will register their metadata components in the DoD Metadata Registry. Registering metadata components in the DoD Metadata Registry supports many-to-many interoperability by providing system architects and developers with insight into existing data schemas that they can

employ and extend. The requirement that extensible metadata be registered applies to the schema of the metadata, not the actual metadata values. As a clarification, this does not mean that any metadata that is associated with a data asset will be registered in the DoD Metadata Registry, it only means that the format, or components, of the extensible metadata will be registered.

C2.1.3. The figure below (figure C2.F2) shows the composition of the DDMS.

Figure C2.F2. DDMS Logical Model



C2.1.4. The Core Layer category sets, which are comprised of categories of elements, are described below.

C2.1.4.1. Security Set elements enable the description of security classification and related fields. These fields provide for the specification of security-related attributes and may be used to support access control. The security set is not intended to support comprehensive resource security marking. Additional security elements may be represented using the metadata elements defined by organizations and COIs and stored in the Extensible Layer.

C2.1.4.2. The Resource category elements provide a way to describe aspects of a data asset that support maintenance, administration, and pedigree of the data asset.

C2.1.4.3. The Summary Content categories provide the description of concepts and additional contextual aspects of the data asset being tagged and include such elements as subject, description, and coverage. These elements are intended to capture asset-level information that describes the content and/or context. The purpose of the Summary Content Category Set is to aid in precision discovery and to offer a level of description above standard indexing. This version of the DDMS provides basic Summary Content elements to capture content metadata. It should be noted that activities are underway to test additional Summary Content elements that provide a more robust, structured method of describing the contents of a resource. Candidates for addition to the Summary Content Category set follows Person, Place, Organization, Material, and Event elements.

C2.1.4.4. The Format elements provide the description of physical attributes of the asset and include elements such as file size, bit-rate or frame-rate, and mime type.

C2.2. Primary Categories

C2.2.1. A primary category is a group of elements that are part of the Core Layer. Each primary category contains the specific information elements that should be associated with a data asset. Table C2.T1 shows a mapping for the Core Layer Category Sets to primary categories, their obligation, and a page reference for each. Mandatory metadata categories indicate that at least one element within that category is mandatory. Optional data categories should be provided when relevant information is available.

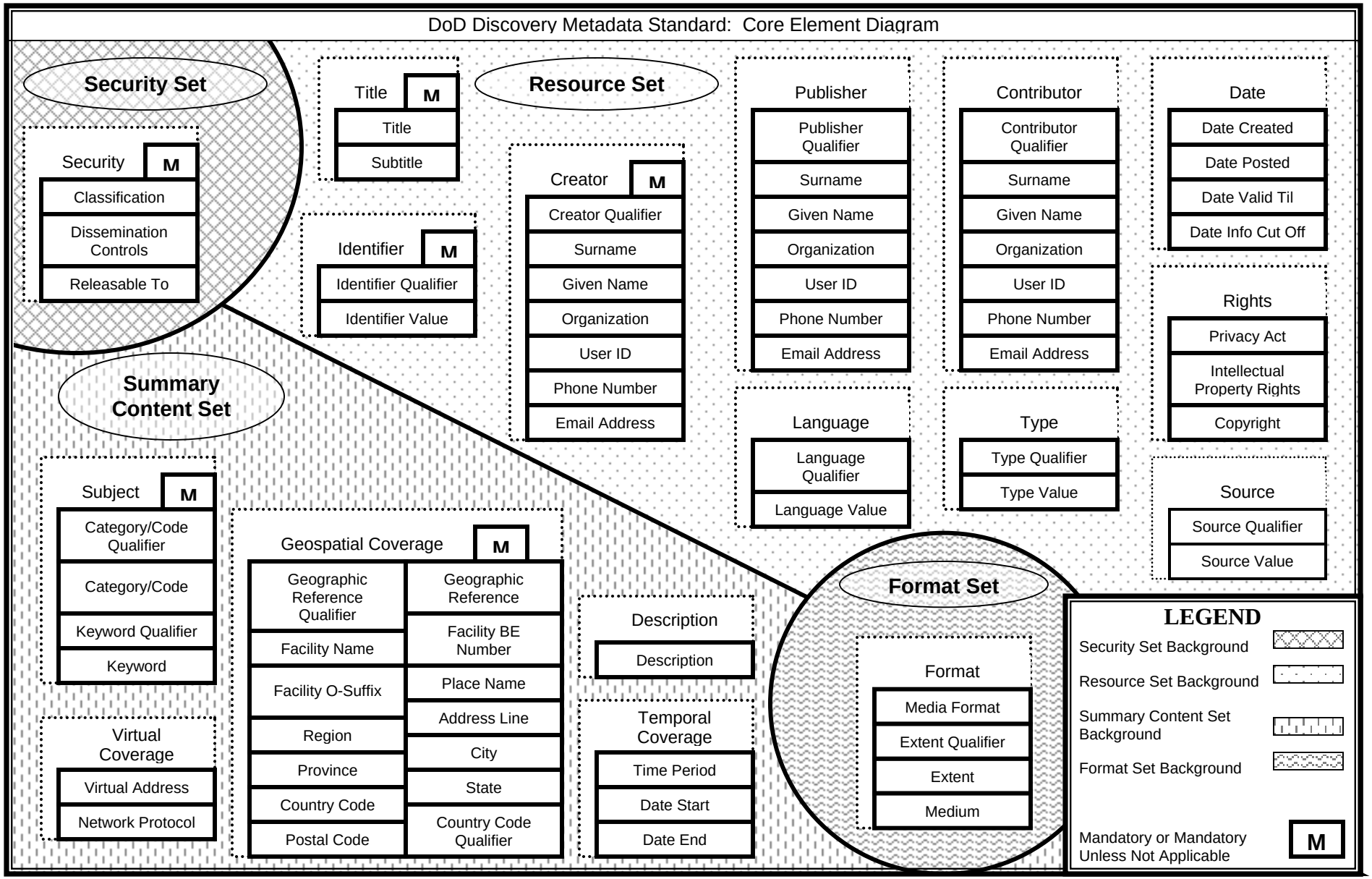
Table C2.T1. DDMS Primary Category Sets

Core Layer Category Set	Primary Category	Obligation	Page
The Security elements enable the description of security classification and related fields	Security	Mandatory	23
Resource elements enable the description of maintenance and administration information	Title	Mandatory	25
	Identifier	Mandatory	27
	Creator	Mandatory	28
	Publisher	Optional	30
	Contributor	Optional	33
	Date	Optional	35
	Rights	Optional	37
	Language	Optional	39
	Type	Optional	40
	Source	Optional	41
The Summary Content elements enable the description of concepts and topics	Subject	Mandatory	42
	Geospatial Coverage	Mandatory unless not Applicable	44
	Temporal Coverage	Optional	48
	Virtual Coverage	Optional	50
	Description	Optional	52
The Format elements enable the description of physical attributes of the asset	Format	Optional	53

C2.3. Primary Category Elements

C2.3.1. The elements contained in a category comprise the actual list of metadata that the DDMS defines. The majority of the DDMS elements are optional, with a minimum of mandatory elements. Optional elements are very important to the success of the DDMS and their use will provide greater exposure and understanding of data assets. The results of Enterprise Discovery queries may be presented to users based on various factors. Accordingly, the inclusion of optional DDMS elements may increase the ability for a data asset to be discovered and used. Conditional elements are required to be present when the specified condition has been met. Figure C2.F3 provides a visual guide to the element, category, and category set system. Categories containing a mandatory element are marked with a bold "**M**" next to the category name.

Figure C2.F3. Core Element Diagram



Chapter 3. Data Element Guide

C3.1. Notes On Element Definitions

C3.1.1. In an effort to assist the reader in understanding the category and element listing, this section provides a legend to the format of the category and element tables.

C3.1.2. The DDMS elements are described using a set of tables with descriptive fields derived from the International Standard Organization ISO/IEC *11179-3, Information Technology — Specification and standardization of data elements — Part 3: Basic attributes of data elements*.

C3.1.3. The categories and elements that compose the DDMS are contained in chapters 4 through 7 of this document. Each category is defined using three tables. The first table lists the basic category makeup. The second table lists and defines the elements contained within the category, and the third table provides implementation examples in different formats to aid in understanding. The formats shown in the example table are not meant to endorse a particular language implementation, but merely to demonstrate how the metadata might be stored. Additionally, there are no constraints placed upon the repetition of an element. Table C3.T2 lists and defines the fields used in the primary category tables. Table C3.T3 lists and defines the fields used in the element tables. Finally, Table C3.T4 lists and defines the formats of the example tables.

Table C3.T2. Category Fields and Explanations

Field Name	Definition
Metadata Category Definition	A plain text definition of the element.
Obligation	Specifies whether use of the element is mandatory, mandatory unless not applicable, conditional, or optional.
Date of Last Modification	Specifies the date on which the element or attribute was last modified.
Source or Related Reference	Reference to original source material used to develop or derive the element.
Comments	Specifies what the element encompasses, or any useful notes.

Table C3.T3. Category Element Fields and Explanations

Field Name	Definition
Name	Specifies the formal name of the element.
Definition	A plain text definition of the element.
Obligation	Specifies whether use of the element is mandatory, mandatory unless not applicable, conditional, or optional. * Note on Conditional Obligation: When an element's obligation is listed as "Conditional," the condition will be listed following a colon, within the element's obligation cell. Additionally, conditional elements may be used, even though the condition may not have been met.
Comments	Specifies what the element encompasses, or any useful notes.

Table C3.T4. Category Example Fields and Explanations

Field Name	Definition
Text	A plain text example depicting the elements in a category may be stored as comma-separated metadata.
XML	An XML example of how the elements in a category may be stored as metadata.
HTML	An HTML example of how the elements in a category may be stored as metadata.

Table C4.T1. Security	
Metadata Category Description	The highest level of classification, dissemination controls, and declassification rules applicable to a data asset.
Obligation	Mandatory
Modification Date	2003-05-16
Source or Related Reference	DoD 5200.1-R EO 12958
Comment	The mandatory security element is classification. The conditional elements are (if applicable) Dissemination Controls and Releaseable To. Other markings may be used, such as FGI Source Protected, Declassification, Derived From, FGI Source Open, SCI Controls, Classified By, Classification Authority, etc., but they are not required for discovery.

Table C4.T1.1. Security Category Elements			
Name	**Definition**	**Obligation**	**Comment**
Classification	Security markings that specify how a data asset shall be stored, protected, and destroyed, as required by DoD 5200.1-R	Mandatory	Values will indicate 'Top Secret' 'Secret' 'Confidential' or 'Unclassified' in accordance with DoD 5200.1-R. Acceptable permutations are 'Top Secret', 'TS', 'T', 'Secret', 'S', 'Sec', 'Confidential', 'C', 'Conf', 'Unclassified', 'Unclass', 'U', etc.
Dissemination Controls	Control markings that identify the expansion or limitation on the distribution of the resource. See DoD 5200.1-R for a complete list of markings.	Conditional: use if applicable.	Dissemination controls can include FOUO, NF ('No Foreign'), LES, DES, FGI Controlled, etc. Controlled Unclassified Information (CUI) may also be included. SBU may be used if it is part of a Component's security vocabulary
Releasable To	Dissemination control under authority for classified information that an originator has predetermined to be releasable or has been released, through established foreign disclosure procedures or channels, to the indicated foreign countr(ies) or international org.	Conditional: use if applicable	Markings for Releasable To can include country codes or organization codes. See DoD 5200.1-R for an acceptable list of Releasable To codes.

Table C4.T1.2. Security Category Examples	
Text	Classification: Unclassified Dissemination Controls: FOUO Releasable To: UK
XML	<security classification="Unclassified" disseminationControls="FOUO" releaseableTo="UK"/> [ALTERNATE] <security> <classification>Unclassified</classification> <disseminationControls>FOUO</disseminationControls> <releasableTo>UK</releasableTo> </security>
HTML	<meta name="security.classification" content="Unclassified"> <meta name="security.disseminationcontrols" content="FOUO"> <meta name="security.releasableto" content="UK">

Table C5.T1. Title	
Metadata Category Description	A name, or names, given to the resource
Obligation	Mandatory
Modification Date	2003-05-16
Source or Related Reference	DCMI: title, v. 004
Comment	The title category must contain at least one title, and may contain subtitles, or supplementary, explanatory titles for use on cover pages and for cataloging and searching.

Table C5.T1.1. Title Category Elements

Name	Definition	Obligation	Comment
Title	Typically, a title will be a name by which the resource is formally known.	Mandatory	
Subtitle	A subtitle may be any form of the title used as a substitute, or it may be an alternative to the formal title of the resource.	Optional	

Table C5.T1.2. Title Category Examples	
Text	Title: Department of Defense Discovery Metadata Standard (DDMS) Subtitle: Review Version 1.2
XML	<Title> Department of Defense Discovery Metadata Standard (DDMS) </Title> <Subtitle> Review Version 1.2 </Subtitle>
HTML	<meta name=”title” content=” Department of Defense Discovery Metadata Standard (DDMS)”> <meta name=”subtitle” content=” Review Version 1.2”>

Table C5.T2. Identifier	
Metadata Category Description	An unambiguous reference to the resource within a given context. An internal, external, and/or universal identification number for a publication
Obligation	Mandatory
Modification Date	2003-05-16
Source or Related Reference	DCMI: identifier, v. 004 IC MSP v. 1.0a: IdentifierList
Comment	An example of an identifier would be an International Standard Serial Number (ISSN), or an Universal Resource Locator (URL). Any type of identifier can be accommodated, so long as the identifier qualifier is specified with the identifier value.

Table C5.T2.1. Identifier Category Elements			
Name	**Definition**	**Obligation**	**Comment**
Identifier Qualifier	A qualifier that specifies the domain from which the identifier value is taken.	Mandatory	
Identifier Value	An unambiguous reference to the resource within a given context. An internal, external, and/or universal identification number for a data asset or resource	Mandatory	Permissible values must conform to the value supplied in Identifier Qualifier.

Table C5.T2.2. Identifier Category Examples	
Text	Identifier qualifier: URL Identifier: http://www.dod.mil/index.html
XML	<Identifier qualifier=”URL”>http://www.dod.mil/index.html</Identifier>
HTML	<meta name=”identifier.qualifier” content=”URL”> <meta name=”identifier.value” content=”http://www.dod.mil/index.html”>

Table C5.T3. Creator	
Metadata Category Description	Information about the entity responsible for generating the resource
Obligation	Mandatory
Modification Date	2003-05-16
Source or Related Reference	DCMI: creator, v. 004 IC MSP v. 1.0a: AuthorInfo, POCInfo
Comment	When a creator is a service or an organization, and not an individual, it is expected that the contact authority (person or organization) for the resource will be listed.

Table C5.T3.1. Creator Category Elements			
Name	**Definition**	**Obligation**	**Comment**
Creator Qualifier	The type of entity responsible for the resource.	Mandatory	Values in this element should indicate whether the other mandatory creator elements relate information pertaining to an 'Author' 'Point of Contact' 'Organization' 'Entity' or 'Service'
Surname	A name shared in common to identify members of a family; also called "last name"	Conditional: if creator qualifier is Author or POC	This value must contain a complete name, and cannot be an initial.
Name	A name given to a person at birth or baptism, in addition to a surname. Can also be the name of an entity or service.	Conditional: if creator qualifier is Entity or Service	
User ID	Unique identifier applied by an agency to an author, coauthor, POC, tasking requester or addressee.	Optional	
Organization	The identification of an organization or agency with which an individual or service has an affiliation.	Conditional: if creator qualifier is an Organization	This might be an abbreviation for an agency, or organization.

		or not listed	
…Continued: Table C5.T3.1. (Creator Category Elements)			
Phone Number	A telephone number.	Optional	This value must include country code and area code, when applicable
Email Address	An address for electronic mail	Optional	

Table C5.T3.2. Creator Category Examples	
Text	Creator qualifier: Author Surname: Jones Name: John Q. UserID: 12345678 Affiliation: U.S. Army Phone Number: 222-222-2222 Email: jq.jones@someagency.mil
XML	<Creator qualifier=”author”> <Surname>Jones</Surname> <Name>John Q.</Name> <UserID>12345678</UserID> <Affiliation>U.S. Army</Affiliation> <Phonenumber>222-222-2222</Phonenumber> <Email>jq.jones@someagency.mil</Email> </Creator>
HTML	<meta name=”creator.qualifier” content=”author”> <meta name=”creator.surname” content=”Jones”> <meta name=”creator.name” content=”John Q.”> <meta name=”creator.userid” content=”12345678”> <meta name=”creator.affiliation” content=”U.S.Army”> <meta name=”creator.phone” content=”222-222-2222”> <meta name=”creator.email” content=”jq.jones@someagency.mil”>

Table C5.T4. Publisher	
Metadata Category Description	This category is used to tag the identification of the entity responsible for releasing the data asset—the entity primarily responsible for the intellectual content of the product. It is intended that this category apply whenever applicable to an organization, as opposed to a person.
Obligation	Optional
Modification Date	2003-05-16
Source or Related Reference	DCMI: publisher, v. 004 IC MSP v. 1.0a: Publisher
Comment	Typically, the name of a Publisher should be used to indicate the organization, agency, or domain responsible for the resource.

Table C5.T4.1. Publisher Category Elements

Name	Definition	Obligation	Comment
Publisher Qualifier	The type of entity responsible for the resource.	Conditional: if an individual is listed in Surname, Name, etc.	Values in this element should indicate whether the other publisher elements relate information pertaining to an 'Author' 'Point of Contact' 'Organization' 'Entity' or 'Service'
Surname	A name shared in common to identify members of a family; also called "last name"	Conditional: if creator qualifier is Author or POC	This value must contain a complete name, and cannot be an initial.
Name	A name given to a person at birth or baptism, in addition to a surname. Can also be the name of an entity or service.	Conditional: if creator qualifier is Entity or Service	
User ID	Unique identifier applied by an agency to an author, coauthor, POC, tasking requester or addressee.	Optional	

Organization	The identification of an organization or agency with which an individual or service has an affiliation.	Conditional: if creator qualifier is an Organization or not listed.	This might be an abbreviation for an agency, or organization.
…Continued: Table C5.T4.1. (Publisher Category Elements)			
Phone Number	A telephone number.	Optional	This value must include country code and area code, when applicable
Email Address	An address for electronic mail	Optional	

Table C5.T4.2. Publisher Category Examples	
Text	Publisher qualifier: POC Surname: Jones Name: John Q. UserID: 12345678 Affiliation: U.S. Army Phone Number: 222-222-2222 Email: jq.jones@someagency.mil
XML	<Publisher qualifier="POC"> <Surname>Jones</Surname> <Name>John Q.</Name> <UserID>12345678</UserID> <Affiliation>U.S. Army</Affiliation> <Phonenumber>222-222-2222</Phonenumber> <Email>jq.jones@someagency.mil</Email> </Publisher>

HTML	<meta name=”publisher.qualifier” content=”POC”> <meta name=”publisher.surname” content=”Jones”> <meta name=”publisher.name” content=”John Q.”> <meta name=”publisher.userid” content=”12345678”> <meta name=”publisher.affiliation” content=”U.S.Army”> <meta name=”publisher.phone” content=”222-222-2222”> <meta name=”publisher.email” content=”jq.jones@someagency.mil”>

Table C5.T5. Contributor	
Metadata Category Description	Information about an organization, person, or entity, that contributed intellectual content to a resource, other than the publishing organization
Obligation	Optional
Modification Date	2003-05-16
Source or Related Reference	DCMI: contributor, v. 004 IC MSP v. 1.0a: Contributor
Comment	Examples of a Contributor include a person, an organization, an entity, or a service.

Table C5.T5.1. Contributor Category Elements			
Name	**Definition**	**Obligation**	**Comment**
Contributor Qualifier	The type of entity responsible for the resource.	Conditional: if an individual is indicated in Surname, Name, etc.	Values in this element should indicate whether the other contributor elements relate information pertaining to an 'Author' 'Point of Contact' 'Organization' 'Entity' or 'Service'
Surname	A name shared in common to identify members of a family; also called "last name"	Conditional: if creator qualifier is Author or POC	This value must contain a complete name, and cannot be an initial.
Name	A name given to a person at birth or baptism, in addition to a surname. Can also be the name of an entity or service.	Conditional: if creator qualifier is Entity or Service	
User ID	Unique identifier applied by an agency to an author, coauthor, POC, tasking requester or addressee.	Optional	
Organization	The identification of an organization or agency with which an individual or service has an affiliation.	Conditional: if creator qualifier is Organization or	This might be an abbreviation for an agency, or organization.

		not listed	
…Continued: Table C5.T5.1. (Contributor Category Elements)			
Phone Number	A telephone number.	Optional	This value must include country code and area code, when applicable
Email Address	An address for electronic mail	Optional	

Table C5.T5.2. Contributor Category Examples	
Text	Contributor qualifier: Author Surname: Jones Name: John Q. UserID: 12345678 Affiliation: U.S. Army Phone Number: 222-222-2222 Email: jq.jones@someagency.mil
XML	<Contributor qualifier=”author”> <Surname>Jones</Surname> <Name>John Q.</Name> <UserID>12345678</UserID> <Affiliation>U.S. Army</Affiliation> <Phonenumber>222-222-2222</Phonenumber> <Email>jq.jones@someagency.mil</Email> </Contributor>
HTML	<meta name=”contributor.qualifier” content=”author”> <meta name=”contributor.surname” content=”Jones”> <meta name=”contributor.name” content=”John Q.”> <meta name=”contributor.userid” content=”12345678”> <meta name=”contributor.affiliation” content=”U.S.Army”> <meta name=”contributor.phone” content=”222-222-2222”> <meta name=”contributor.email” content=”jq.jones@someagency.mil”>

Table C5.T6. Date	
Metadata Category Description	A calendar date associated with an event in the life cycle of the resource.
Obligation	Optional
Modification Date	2003-05-16
Source or Related Reference	ICCM v.1.0: date DCMI: date, v. 004 IC MSP v. 1.0a: Date
Comment	Recommended practice is that date be specified in one of the following formats: YYYY YYYY-MM YYYY-MM-DD YYYY-MM-DDThh:mmTZD YYYY-MM-DDThh:mm.ssTZD YYYY-MM-DDThh:mm:ss.sTZD Where: YYYY 0000 through current year MM 01 through 12 (month) DD 01 through 31 (day) hh 00 through 24 (hour) mm 00 through 59 (minute) ss 00 through 60 (second) .s .0 through 999 (fractional second) This profile suggests two ways of handling time zone offsets: 1. Times are expressed in UTC (Coordinated Universal Time), with a special UTC designator ("Z"). 2. Times are expressed in local time, together with a time zone offset in hours and minutes. A time zone offset of "+hh:mm" indicates that the date/time uses a local time zone which is "hh" hours and "mm" minutes ahead of UTC. A time zone offset of "-hh:mm" indicates that the date/time uses a local time zone which is "hh" hours and "mm" minutes behind UTC.

Table C5.T6.1. Date Category Elements			
Name	**Definition**	**Obligation**	**Comment**
Date Created	Date of creation of the resource	Optional	
Date Posted	The date a product is posted to a shared network or system.	Optional	
Date Valid Til	The date that a product should be removed from a registry, index, or catalog	Optional	
Date Info Cut Off	The cutoff date of information in a product. This is commonly referred to as Information Cutoff Date (ICOD). It is the date of last input.	Optional	

Table C5.T6.2. Date Category Examples	
Text	Date Created: 2003-02-17 Date Posted: 2003-02-17 Date Valid Til: 2003-02-17 Date Info Cut Off: 2001-10-31T17:00-05:00
XML	<Date> <DateCreated>2003-02-17</DateCreated> <DatePosted>2003-02-17</DatePosted> <DateValidTil>2003-02-17</DateValidTil> <DateInfoCutOff>2001-10-31T17:00-05:00</DateInfoCutOff> </Date >
HTML	<meta name=”date.created” content=”2003-02-17”> <meta name=”date.posted” content=”2003-02-17”> <meta name=”date.validtil” content=”2003-02-17”> <meta name=”date.infocutoff” content=”2001-10-31T17:00-05:00”>

Table C5.T7. Rights	
Metadata Category Description	Information about rights held in and over the resource
Obligation	Optional
Modification Date	2003-05-16
Source or Related Reference	DCMI: rights, v. 004 IC MSP v. 1.0a: Rights
Comment	While copyright is considered a type of intellectual property right, in this instance copyright will stand alone, and intellectual property right will be used to indicate all other intellectual rights other than copyrights.

Table C5.T7.1. Rights Category Elements

Name	Definition	Obligation	Comment
Privacy Act	An indicator that this product is categorized as containing personal information subject to protection by the Privacy Act.	Optional	A yes/no value used to specify applicability of the rights. The default is “no”.
Intellectual Property Rights	An indicator identifying products under protection against reproduction and distribution without the express written permission of the intellectual property rights owner.	Optional	A yes/no value used to specify applicability of the rights. The default is “no”.
Copyright	An indicator identifying products under protection against reproduction and distribution without the express written permission of the copyright owner	Optional	A yes/no value used to specify applicability of the rights. The default is “no”.

Table C5.T7.2. Rights Category Examples	
Text	Privacy Act: yes Copyright: yes Other Rights: no
XML	<Rights privacyActr=”yes” intellectualPropertyRights=”yes” otherRights=”no”/>
HTML	<meta name=”rights.privacy” content=”yes”> <meta name=”rights.intellectualproperty” content=”yes”> <meta name=”rights.other” content=”no”>

Table C5.T8. Language	
Metadata Category Description	The primary language of the intellectual content of the resource
Obligation	Optional
Modification Date	2003-05-16
Source or Related Reference	DCMI: language, v. 004 IC MSP v. 1.0a: Language
Comment	The most specific in-scope language present (if any) should be specified in this category.

Table C5.T8.1. Language Category Elements			
Name	**Definition**	**Obligation**	**Comment**
Language Qualifier	The value that specifies the originating agency or discipline of the language vocabulary.	Conditional: if Language Value is supplied	Specifies the domain vocabulary of which the Language Value is a member. ISO 639-1 and ISO 639-2, *Codes for the representation of names of languages*, reference 2 and 3 digit language codes.
Language Value	The identification of the content language	Optional	Must be a valid code from the vocabulary specified in the Language Qualifier.

Table C5.T8.2. Language Category Examples	
Text	Language qualifier: ISO 639-1 Language: fr
XML	<Language xml:lang=”fr”/>
HTML	<meta name=”language.qualifier” content=”ISO 639-1”> <meta name=”language” content=”fr”>

Table C5.T9. Type	
Metadata Category Description	The nature, genre, or discipline, of the content of the resource
Obligation	Optional
Modification Date	2003-05-16
Source or Related Reference	DCMI: type, v. 004 IC CSM: IL.itype
Comment	Recommended best practice is to select a value from a controlled vocabulary (for example, the DCMI Type Vocabulary [DCMITYPE]). To describe the physical or digital manifestation of the resource, use the Format element.

Table C5.T9.1. Type Category Elements			
Name	**Definition**	**Obligation**	**Comment**
Type Qualifier	The value that specifies the originating agency or discipline of the type vocabulary.	Conditional: if Type Value is supplied	Specifies the domain vocabulary of which the Type Value is a member.
Type Value	Type includes terms describing general categories, functions, genres, or aggregation levels for content.	Optional	Must be a valid code from the vocabulary specified in the Type Qualifier.

Table C5.T9.2. Type Category Examples	
Text	Type qualifier: document Type: briefing
XML	< Type qualifier=”document”/> briefing </Type>
HTML	<meta name=”type.qualifier” content=”document”> <meta name=”type.value” content=”briefing”>

Table C5.T10.	Source
Metadata Category Description	References to assets or resources from which the tagged data asset is derived.
Obligation	Optional
Modification Date	2003-05-16
Source or Related Reference	DCMI: type, v. 004
Comment	Sources may be derived partially or wholly, and it is recommended that an identifier (such as a string or number from a formal identification system) be used as a reference.

Table C5.T10.1. Source Category Elements			
Name	**Definition**	**Obligation**	**Comment**
Source Qualifier	The value that specifies a formal identification system used to reference a source.	Optional	Specifies the domain identification system which defines the format of Source Value.
Source Value	The identifier of a referenced source.	Optional	Source Value can be specified without listing the Source Qualifier.

Table C5.T10.2. Source Category Examples	
Text	Source qualifier: none Source: DDMS_PRV_1_2g_16May2003.doc
XML	<Source qualifier=”none”/> DDMS_PRV_1_2g_16May2003.doc </Source>
HTML	<meta name=”source.qualifier” content=”none”> <meta name=”source.value” content=” DDMS_PRV_1_2g_16May2003.doc”>

Chapter 6. Summary Content Category Set

Table C6.T1. Subject	
Metadata Category Description	Subject keyword(s) that characterize the subject matter of a resource
Obligation	Mandatory
Modification Date	2003-05-16
Source or Related Reference	DCMI: subject, v. 004 IC MSP v. 1.0a: Subject
Comment	Typically, a Subject will be expressed as keywords, key phrases or classification codes that describe a topic of the resource. Recommended best practice is to select a value from a controlled vocabulary or formal classification scheme. This may list keywords that apply to the resource, or a particular subject category, which will aid the user in understanding the genre of the content.

Table C6.T1.1. Subject Category Elements			
Name	**Definition**	**Obligation**	**Comment**
Keyword Qualifier	The keyword qualifier should specify the source of the keyword vocabulary.	Optional	Specifies the domain vocabulary of which the Keyword Value is a member.
Keyword	An important word or concept that is addressed in the resource	Mandatory	The value for a keyword must be supplied, and may come from the vocabulary specified in Keyword Qualifier.

Table C6.T1.2. Subject Category Examples	
Text	Keyword qualifier: Navy Keyword: Cruise Missiles
XML	<Keyword qualifier=”Navy”>Cruise Missiles</Keyword> [ALTERNATE] <Subject> <Keyword>missile</Keyword> <Keyword>targeting</Keyword> </Subject>
HTML	<meta name=”subject.qualifier” content=”Navy”> <meta name=”subject.keyword” content=”Cruise Missiles”>

Table C6.T2. Geospatial Coverage	
Metadata Category Description	Geographic place names or coordinates that relate to the resource, such as a jurisdiction, point, area, or volume on land, in space, or at sea.
Obligation	Mandatory Unless Not Applicable
Modification Date	2003-05-16
Source or Related Reference	DCMI: spatial, v. 002 IC MSP v. 1.0a: Geospatial
Comment	The obligation of this category is selected to show metadata creators that they must determine whether the geographic reference subject matter of the resource is applicable for discovery purposes. If BENumber and Osuffix are supplied, no other elements may be supplied in the Geospatial Coverage category.

Table C6.T2.1. Geospatial Coverage Category Elements			
Name	**Definition**	**Obligation**	**Comment**
Geographic Reference Qualifier	A vocabulary notation specifying the type of geographic reference.	Mandatory Unless not Applicable	This element must indicate 'GeographicCoordinates' 'MilitaryGridReference' or 'WorldGeographicReference'
Geographic Reference	A geographic reference specified using a particular vocabulary.	Mandatory Unless not Applicable	This element must contain a valid geographic reference using the vocabulary notation specified in the Geographic Reference Qualifier. If the qualifier is 'GeographicCoordinates' the element must be in a latitude/longitude format, and also list the applicable mapping datum. If the qualifier is 'WorldGeographicReference' the element must be in UTM or MGRS, and also list the mapping datum –as applicable.

…Continued: Table C6.T2.1. (Geospatial Coverage Category Elements)			
Facility BE Number	A specific identification number or point location of a facility or installation.	Optional	Facility BE Number and Osuffix may only be used if no other Geospatial Coverage category elements are supplied.
Facility Osuffix	A specific identification number or point location, in conjunction with a Facility BE Number.	Conditional: if Facility BE Number is listed	Facility BE Number and Osuffix may only be used if no other Geospatial Coverage category elements are supplied.
Region	The name of a sub-national or transnational geographic or geopolitical region that is a subject of the resource.	Optional	
Place Name	The name of a place of interest, other than a country, region, or facility.	Optional	
Facility Name	A structure or a collection of structures with a unified function.	Optional	A facility is defined as a real property performing a unique function that may consist of: a building, a structure, a utility system, pavement, and underlying land.
Address Line	A single line of a postal address.	Optional	Use for street number and name, or PO box number, or attention line, or department name. Do not use for city, state, or province name, or for the postal code.
City	A city name.	Optional	
State	The abbreviation of a state name	Optional	
Postal Code	A mailing code designation, such as a ZIP code in the U.S. or a postcode in Britain	Optional	
Country Code Qualifier	A vocabulary notation specifying the source of the country abbreviations.	Conditional: if Country Code is supplied	Specifies the domain vocabulary of which the Country Code is a member. Acceptable values might indicate 2 or 3 digit code vocabularies (from the ISO 3166 standard on Country Codes) or 'FIPS' (from the *Federal Information Processing Standard* 10-4 standard on Country names and divisions) etc.

…Continued: Table C6.T2.1. (Geospatial Coverage Category Elements)			
Country Code	A standards-based abbreviation of a country name.	Optional	A permissible value according to the vocabulary specified in Country Code Qualifier
Province	A name of a political subdivision	Optional	

Table C6.T2.2. Geospatial Coverage Category Examples		
Text	GeoRef qualifier: Military Grid Reference GeoRef: 18SUU123456 Facility: Red Forces command and control headquarters Province: Tuscany Region: Mid-Atlantic Place Name: The White House Address Line: 1600 Pennsylvania Avenue NW City: Washington State: DC Country qualifier: ISO-3 Country: USA Postal code: 20500	BEnumber: 1234DD56789 Osuffix: DD123
XML	<GeoSpatial> <GeoRef referenceType="MilitaryGridReference">18SUU123456</GeoRef> <Facility BEnumber="1234DD56789" Osuffix="DD123">Red Forces command and control headquarters</Facility> <Province>Tuscany</Province> </GeoSpatial> [ALTERNATE] <GeoSpatial> <Region>Mid-Atlantic states</Region> <PlaceName>The White House</PlaceName> <AddressLine>1600 Pennsylvania Avenue NW</AddressLine> <City>Washington</City> <State>DC</State> <CountryCode vocabulary="ISO-3">USA</CountryCode> <PostalCode>20500</PostalCode> </GeoSpatial>	

…Continued: Table C6.T2.2. (Geospatial Coverage Category Elements)	
HTML	<meta name=”geo.referencequalifier” content=”MilitaryGridReference”> <meta name=”geo.reference” content=”18SUU123456”> <meta name=”geo.BEnumber” content=”1234DD56789”> <meta name=”geo.Osuffix” content=”DD123”> <meta name=”geo.facility” content=”Red Forces command and control headquarters”> <meta name=”geo.province” content=”Tuscany”> <meta name=”geo.region” content=”Mid-Atlantic states”> <meta name=”geo.placename” content=”The White House”> <meta name=”geo.addressline” content=”1600 Pennsylvania Avenue NW”> <meta name=”geo.city” content=”Washington”> <meta name=”geo.state” content=”DC”> <meta name=”geo.countryqualifier” content=”ISO-3”> <meta name=”geo.country” content=”USA”> <meta name=”geo.postalcode” content=”20500”>

Table C6.T3. Temporal Coverage	
Metadata Category Description	Subject matter coverage expressed in terms of one or more periods of time
Obligation	Optional
Modification Date	2003-05-16
Source or Related Reference	DCMI: temporal, v. 002 IC MSP v. 1.0a: Temporal
Comment	Time Period can be expressed as a textual name. Recommended practice is that Data Start and Date End be specified in one of the following formats: YYYY YYYY-MM YYYY-MM-DD YYYY-MM-DDThh:mmTZD YYYY-MM-DDThh:mm.ssTZD YYYY-MM-DDThh:mm:ss.sTZD Where: YYYY 0000 through current year MM 01 through 12 (month) DD 01 through 31 (day) hh 00 through 24 (hour) mm 00 through 59 (minute) ss 00 through 60 (second) .s .0 through 999 (fractional second) This profile suggests two ways of handling time zone offsets: 1. Times are expressed in UTC (Coordinated Universal Time), with a special UTC designator ("Z"). 2. Times are expressed in local time, together with a time zone offset in hours and minutes. A time zone offset of "+hh:mm" indicates that the date/time uses a local time zone which is "hh" hours and "mm" minutes ahead of UTC. A time zone offset of "-hh:mm" indicates that the date/time uses a local time zone which is "hh" hours and "mm" minutes behind UTC.

Table C6.T3.1. Temporal Coverage Category Elements			
Name	**Definition**	**Obligation**	**Comment**
Date Start	The start date of a period of time.	Optional	
Date End	The end date of a period of time.	Optional	
Time Period	An interval of time, that can be expressed as a named era.	Optional	

Table C6.T3.2. Temporal Coverage Category Examples	
Text	Time Period: The 50's Date Start: 1950-01-01 Date End: 1959-12-31
XML	<Temporal> <TimePeriod periodname="The 50's">> <DateStart>1950-01-01</DateStart> <DateEnd>1959-12-31</DateEnd> </TimePeriod> </Temporal> [ALTERNATE] <Temporal> <DateStart>2001-01-01T00:01Z</DateStart> <DateEnd>2001-12-31T24:00Z</DateEnd> </Temporal>
HTML	<meta name="temporal.TimePeriod" content="the 50's"> <meta name="temporal.DateStart" content="1950-01-01"> <meta name="temporal.DateEnd" content="1559-12-31">

Table C6.T4. Virtual Coverage	
Metadata Category Description	The subject-matter coverage of a publication in terms of one or more virtual addresses
Obligation	Optional
Modification Date	2003-05-16
Source or Related Reference	IC MSP v. 1.0a: Virtual
Comment	For this purpose, a "virtual" address is a computer network address, expressed as a set of Internet Protocol (IP) octets, a uniform resource locator (URL), or some other network-addressing scheme, such as a network name or locale.

Table C6.T4.1. Virtual Coverage Category Elements			
Name	**Definition**	**Obligation**	**Comment**
Virtual Address	A computer or telecommunications network address, or a network name or locale	Optional	The form of this will depend on the network protocol in use; whether a specific node or an entire subnet is being addressed, *etc.* Examples of virtual addresses are Internet protocol (IP) octets and uniform resource locators (URLs), or a network name or locale.
Network Protocol	The type of rules for data transfer that apply to the Virtual Address.	Conditional: can stand alone, but should be used if Virtual Address is listed	

Table C6.T4.2. Virtual Coverage Category Examples	
Text	Network Protocol: IP Virtual address: 123.456.789.XXX
XML	<Virtual networkProtocol=”IP”>123.456.789.XXX</Virtual> [ALTERNATE] <Virtual>Camp Smith</Virtual>
HTML	<meta name=”virtual.address” content=”123.456.789.XXX”> <meta name=”virtual.networkProtocol” content=”IP”>

Table C6.T5.	Description
Metadata Category Description	An account of the content of the resource.
Obligation	Optional
Modification Date	2003-05-16
Source or Related Reference	DCMI: description, v. 004 IC MSP v. 1.0a: Description
Comment	Description may include but is not limited to: an abstract, reference to a graphical representation of content or a free-text account of the content.

Table C6.T5.1. Description Category Elements			
Name	**Definition**	**Obligation**	**Comment**
Description	The tag used to provide a short description of the product subject, contents and any “bottom line” point the resource conveys.	Optional	Typically a paragraph or less.

Table C6.T5.2. Description Category Examples	
Text	Description: This publication is an analysis of the logistics of re-supplying the cave complex at Tora Bora.
XML	<Description> This publication is an analysis of the logistics of re-supplying the cave complex at Tora Bora. </Description>
HTML	<meta name=”description” content=” This publication is an analysis of the logistics of re-supplying the cave complex at Tora Bora.”>

Table C7.T1. Format	
Metadata Category Description	The physical or digital manifestation of the resource.
Obligation	Optional
Modification Date	2003-05-16
Source or Related Reference	DCMI: format, v. 004
Comment	Typically, Format may include the media-type or dimensions of the resource. Format may be used to determine the software, hardware or other equipment needed to display or operate the resource. Examples of dimensions include size and duration.

Table C7.T1.1. Format Category Elements			
Name	**Definition**	**Obligation**	**Comment**
Media Format	The MIME type for the product object to which this metadata applies.	Optional	The MIME type is expressed as: category/specific-type, such as “image/gif”. A comprehensive list of existing MIME types is available on the Internet at http://www.mime-types.com.
Extent Qualifier	A vocabulary that specifies the type of format extent that will be supplied.	Conditional: Supply if Extent is used.	The qualifier attribute indicates the type of extent value listed. In the case of data bytes, it might indicate ‘byte size’. In the case of a document length, it might indicate ‘page count’. In the case of streaming content, it might indicate ‘bits per second’ or ‘frames per second’.
Extent	A related data size, compression rate, or pixel size (etc.) of the resource	Optional	
Medium	The physical medium or instantiation of the resource.	Optional	

Table C7.T1.2. Format Category Examples	
Text	Media format: Text/XML Extent qualifier: size in Bytes Extent: 75000 Medium: digital
XML	<Format> <MediaFormat>text/XML</MediaFormat> <Extent qualifier = “sizeBytes”>75000</Extent <Medium>digital</Medium> </Format>
HTML	<meta name=”format.media” content=”text/XML”> <meta name=”format.extentqualifier” content=”sizeBytes”> <meta name=”format.extent” content=”75000”> <meta name=”format.medium” content=”digital”>

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AP2. References

Date and Time Formats, Version 1.2, August 27, 1998, published by the World Wide Web Consortium (W3C).

Department of Defense Information Security Program, 5200.1-R, January 1997, published by the Department of Defense.

Department of Defense Net-Centric Data Strategy, Version 1.0, May 9, 2003, signed by the DoD CIO.

Dublin Core Metadata Element Set, Version 1.1, July 2, 1999, published by the Dublin Core Metadata Initiative (DCMI).

Executive Order 12958, EO 12958, April 17, 1995, Classified National Security Information.

Federal Information Processing Standard FIPS PUB 10-4, April, 1995, Countries, Dependencies, Areas of Special Sovereignty, and Their Principal Administrative Divisions.

Intelligence Community Metadata Standard for Publishing (IC MSP), Data Element Dictionary, Version 1.0, July 5, 2002, published by the Intelligence Community Metadata Working Group.

International Standard ISO 639-1:2002, July 18, 2002, Codes for the representation of names of languages – Part 1: Alpha-2 code

International Standard ISO 639-2:1998, November 15, 2002, Codes for the representation of names of languages – Part 2: Alpha-3 code

International Standard ISO 3166-1:1998, November 15, 2001, Codes for representation of names of countries and their subdivisions – Part 1: Country Codes

International Standard ISO 8601:2000, 2000, Data elements and Interchange Formats -- Information interchange -- Representation of dates and times, published by the International Standard Organization.

International Standard ISO/IEC 11179-3:2003, March 2003, Information Technology Metadata Registries – Part 3: Registry metamodel and basic attributes, published by the International Standard Organization.

AP3. Definitions

Assets *see Data asset.*

Attribute A name-value pair associated with an element. An attribute is not a stand-alone element, but data detail contained within an element.

Bit-rate The speed, measured in bits-per-second, that a data asset will transfer over the network.

Community of Interest

A group of people who have common concerns and interests.

Conditional The usage of an element is dependent upon a particular condition.

Data asset Any entity that is comprised of data. For example, a database is a data asset that is comprised of data records. In this document, data asset means system or application output files, databases, documents, or web pages. Data asset also includes services that may be provided to access data from an application. For example, a service that returns individual records from a database would be a data asset. Similarly, a web site that returns data in response to specific queries (e.g., www.defenselink.mil) would be a data asset.

Discovery Locating a resource on the Enterprise, using a process (such as a search engine) to obtain knowledge of information content or services that exploit metadata descriptions of enterprise IT resources stored in Directories, Registries, and Catalogs.

Domain A related area of reference, such as an organization's network, or a community of interest.

Element A formatted word that represents a wrapper for a stored value. Synonymous for Tag.

Enterprise Refers to the Department of Defense, its organizations, and related agencies.

Extensible Markup Language (XML)

A tagging language used to describe and annotate data so it can be consumed by human and system interactions. XML is typically arranged hierarchically using XML elements and attributes. It also uses

semantically rich labels to describe elements and attributes to enable meaningful comprehension. An example of XML data describing an element named "Person" appears as follows:

```
<Person>
        <FirstName>John</FirstName>
        <MiddleInitial>H</MiddleInitial>
        <LastName>Doe</LastName>
</Person>
```

Mandatory An element must be supplied, for a given resource.

Mandatory Unless Not Applicable

An element must be supplied, unless the usage of the resource (in regard to that element) is not reliant upon the element contents.

Metadata Information about information. More specifically, information about the meaning of other data.

Metadata Catalog

A system that contains the instances of metadata associated with individual data assets. Typically, a metadata catalog is a software application that uses a database to store and search records (or cards) that describe such items as documents, images, and videos. Search portals and applications would use metadata catalogs to locate the data assets that are relevant to their query.

Metadata Registry

A system that contains information that describes the structure, format, and definitions of data. Typically, a registry is a software application that uses a database to store and search data, document formats, definitions of data, and relationships among data.

Net-Centric (Net-centricity) The realization of a robust, globally interconnected, networked environment in which data is shared timely and seamlessly among users, applications, and platforms.

Optional An element can be supplied, but is not required to be supplied, for a given resource.

Resource A data asset.

Schema A diagrammatic representation, an outline, or a model. In relation to data management, a schema can represent any generic model or structure that deals with the organization, format, structure, or relationship of data. Some examples of schemas are (1) a database table and relationship structure, (2) a document type definition (DTD), (3) a data structure used to pass information between systems, and (4) an XML schema document (XSD) that represents a data structure and related information encoded as XML. Schemas typically do not contain information specific to a particular instance of data.

Shared Space

A mechanism that provides storage of and access to data for users within a bounded network space. Enterprise shared space refers to a store of data that is accessible by all users within or across security domains on the GIG. A shared space provides virtual or physical access to any number of data assets (e.g., catalogs, Web sites, registries, classification networks, document storage, and databases). Any user, system, or application that posts data uses shared space.

Tag A formatted word that represents a wrapper for a stored value. Synonymous for Element.